

## SEQUENCE LISTING

<110> YOUNG, DEBORAH A.  
 WHITTERS, MATTHEW J.  
 VALGE-ARCHER, VIJA  
 COLLINS, MARY  
 WILLIAMS, ANDREW JAMES  
 WITEK, JOANNE

<120> ANTIBODIES AGAINST HUMAN IL-21 RECEPTOR AND USES  
 THEREFOR

<130> 08702.0137-00000

<140>  
 <141>

<150> 60/454,336  
 <151> 2003-03-14

<160> 154

<170> PatentIn Ver. 3.2

<210> 1  
 <211> 113  
 <212> PRT  
 <213> Homo sapiens

<400> 1  
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser  
 1 5 10 15  
 Ser Val Arg Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Asn Ile Tyr  
 20 25 30  
 Ser Val Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met  
 35 40 45  
 Gly Arg Ile Ile Pro Met Arg Asp Ile Ala Asn Tyr Ala Gln Arg Phe  
 50 55 60  
 Gln Gly Arg Val Thr Leu Thr Ala Asp Lys Ser Ser Gly Thr Ala Tyr  
 65 70 75 80  
 Met Glu Leu Arg Gly Leu Arg Ser Asp Asp Thr Ala Val Tyr Trp Cys  
 85 90 95  
 Ala Thr Leu Ala Gly Pro Leu Asp Ser Trp Gly Gln Gly Thr Leu Val  
 100 105 110  
 Thr

<210> 2  
 <211> 113  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 2

Ser Ser Glu Leu Thr Gln Asp Pro Ala Val Ser Val Gly Leu Gly Gln  
 1 5 10 15

Thr Val Thr Ile Thr Cys Gln Gly Gly Ser Leu Arg Gln Tyr Tyr Ala  
 20 25 30

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Val Val Ile Tyr  
 35 40 45

Gly Lys Asn Lys Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Thr  
 50 55 60

Thr Ser Gly Asn Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu  
 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Lys Ser Arg Asp Ser Ser Gly Asn His  
 85 90 95

Pro Leu Tyr Val Phe Gly Ala Gly Thr Lys Leu Thr Val Leu Gly Glu  
 100 105 110

Ser

&lt;210&gt; 3

&lt;211&gt; 253

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser  
 1 5 10 15

Ser Val Arg Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Asn Ile Tyr  
 20 25 30

Ser Val Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met  
 35 40 45

Gly Arg Ile Ile Pro Met Arg Asp Ile Ala Asn Tyr Ala Gln Arg Phe  
 50 55 60

Gln Gly Arg Val Thr Leu Thr Ala Asp Lys Ser Ser Gly Thr Ala Tyr  
 65 70 75 80

Met Glu Leu Arg Gly Leu Arg Ser Asp Asp Thr Ala Val Tyr Trp Cys  
 85 90 95

Ala Thr Leu Ala Gly Pro Leu Asp Ser Trp Gly Gln Gly Thr Leu Val  
 100 105 110

Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly  
 115 120 125

Gly Gly Ser Ala Leu Ser Ser Glu Leu Thr Gln Asp Pro Ala Val Ser  
 130 135 140

Val Gly Leu Gly Gln Thr Val Thr Ile Thr Cys Gln Gly Gly Ser Leu  
145 150 155 160

Arg Gln Tyr Tyr Ala Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro  
165 170 175

Val Val Val Ile Tyr Gly Lys Asn Lys Arg Pro Ser Gly Ile Pro Asp  
180 185 190

Arg Phe Ser Gly Thr Thr Ser Gly Asn Thr Ala Ser Leu Thr Ile Thr  
195 200 205

Gly Ala Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Lys Ser Arg Asp  
210 215 220

Ser Ser Gly Asn His Pro Leu Tyr Val Phe Gly Ala Gly Thr Lys Leu  
225 230 235 240

Thr Val Leu Gly Ala Ala Ala His His His His His His  
245 250

<210> 4

<211> 5

<212> PRT

<213> Homo sapiens

<400> 4

Ile Tyr Ser Val Ser  
1 5

<210> 5

<211> 17

<212> PRT

<213> Homo sapiens

<400> 5

Arg Ile Ile Pro Met Arg Asp Ile Ala Asn Tyr Ala Gln Arg Phe Gln  
1 5 10 15

Gly

<210> 6

<211> 7

<212> PRT

<213> Homo sapiens

<400> 6

Leu Ala Gly Pro Leu Asp Ser  
1 5

<210> 7

<211> 11

<212> PRT

<213> Homo sapiens

<400> 7

Gln Gly Gly Ser Leu Arg Gln Tyr Tyr Ala Ser  
1 5 10

<210> 8

<211> 7

<212> PRT

<213> Homo sapiens

<400> 8

Gly Lys Asn Lys Arg Pro Ser  
1 5

<210> 9

<211> 13

<212> PRT

<213> Homo sapiens

<400> 9

Lys Ser Arg Asp Ser Ser Gly Asn His Pro Leu Tyr Val  
1 5 10

<210> 10

<211> 339

<212> DNA

<213> Homo sapiens

<400> 10

```
cagggtccagc tgggtgcagtc tggggctgag gtgaagaagc ctgggtcctc ggtgagggtc 60
tcctgcaagg cttctggagg caccttcaac atctatagtg tcagctgggt gcgacaggcc 120
cctggacagg ggcttgagtg gatgggaagg atcatcccta tgcgtgatat tgcaaactac 180
gcgcagaggt tccagggcag ggtcacactt accgcggaca agtcctcggg gacagcctac 240
atggagttgc gcggcctgag atctgacgac acggccgtct attggtgtgc gacattggct 300
ggccccttgg actcctgggg ccagggcacc ctggtcacc 339
```

<210> 11

<211> 339

<212> DNA

<213> Homo sapiens

<400> 11

```
tcgtctgagc tgactcagga cccagctgtg tctgtgggct tgggacagac agtcacgac 60
acatgtcaag gcggcagcct cagacaatat tatgcaagtt ggtaccaaca gaagccagga 120
caggcccctg tggttgtcat ctatggtaaa aataagcgac cctcagggat cccagaccga 180
ttctctggca ccacctcagg caacacagct tccttgacca tcaactggggc tcaggcggaa 240
gatgaggctg actactattg taagtcccgg gacagcagtg gtaaccatcc cctttatgtc 300
ttcggagcag ggaccaagct gaccgtccta ggtgagtca 339
```

<210> 12

<211> 759

<212> DNA

<213> Homo sapiens

<400> 12

```

cagggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctgggtcctc ggtgagggtc 60
tcctgcaagg cttctggagg caccttcaac atctatagtg tcagctgggt gcgacaggcc 120
cctggacagg ggcttgagtg gatgggaagg atcatcccta tgcgtgatat tgcaaactac 180
gcgcagaggt tccagggcag ggtcacactt accgcggaca agtcctcggg gacagcctac 240
atggagttgc gcggcctgag atctgacgac acggccgtct attggtgtgc gacattggct 300
ggccccttgg actcctgggg ccagggcacc ctggtcaccg tctcgagtgg aggcggcggc 360
tcaggcggag gtggctcttg cggtgccgga agtgcacttt cttctgagct gactcaggac 420
ccagctgtgt ctgtgggctt gggacagaca gtcacgatca catgtcaagg cggcagcctc 480
agacaatatt atgcaagttg gtaccaacag aagccaggac aggccctgt ggttgtcatc 540
tatggtaaaa ataagcgacc ctcaaggatc ccagaccgat tctctggcac cacctcaggc 600
aacacagctt ccttgaccat cactggggct caggcgggaag atgaggctga ctactattgt 660
aagtcctggg acagcagtg taacctatcc ctttatgtct tcggagctgg gaccaagctg 720
accgtcctag gtgcggccgc acatcatcat caccatcac                                     759

```

<210> 13

<211> 15

<212> DNA

<213> Homo sapiens

<400> 13

```

atctatagtg tcagc                                     15

```

<210> 14

<211> 51

<212> DNA

<213> Homo sapiens

<400> 14

```

aggatcatcc ctatgcgtga tattgcaaac tacgcgcaga ggttccaggg c          51

```

<210> 15

<211> 21

<212> DNA

<213> Homo sapiens

<400> 15

```

ttggctggcc ccttggaact c                                     21

```

<210> 16

<211> 33

<212> DNA

<213> Homo sapiens

<400> 16

```

caaggcggca gcctcagaca atattatgca agt                                     33

```

<210> 17

<211> 21

<212> DNA

<213> Homo sapiens

<400> 17  
 ggtaaaaata agcgaccctc a 21

<210> 18  
 <211> 39  
 <212> DNA  
 <213> Homo sapiens

<400> 18  
 aagtcctggg acagcagtg taaccatccc ctttatgtc 39

<210> 19  
 <211> 118  
 <212> PRT  
 <213> Homo sapiens

<400> 19  
 Glu Val Gln Leu Val Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg  
 1 5 10 15  
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr  
 20 25 30  
 Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
 35 40 45  
 Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val  
 50 55 60  
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
 65 70 75 80  
 Leu Gln Met Asn Ser Leu Arg Asp Glu Asp Thr Ala Val Tyr Tyr Cys  
 85 90 95  
 Ala Arg His Gly Gln Tyr Ala Leu Asp Ile Trp Gly Gln Gly Thr Met  
 100 105 110  
 Val Thr Val Ser Ser Gly  
 115

<210> 20  
 <211> 108  
 <212> PRT  
 <213> Homo sapiens

<400> 20  
 Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly  
 1 5 10 15  
 Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Trp  
 20 25 30

```
<210> 21
<211> 242
<212> PRT
<213> Homo sapiens
```

<400> 21																
Glu	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly	Val	Val	Gln	Pro	Gly	Arg	
1				5					10					15		
Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	Ser	Ser	Tyr	
			20					25					30			
Gly	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val	
		35					40					45				
Ala	Val	Ile	Ser	Tyr	Asp	Gly	Ser	Asn	Lys	Tyr	Tyr	Ala	Asp	Ser	Val	
	50					55					60					
Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Leu	Tyr	
65					70				75						80	
Leu	Gln	Met	Asn	Ser	Leu	Arg	Asp	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	
				85					90					95		
Ala	Arg	His	Gly	Gln	Tyr	Ala	Leu	Asp	Ile	Trp	Gly	Gln	Gly	Thr	Met	
			100					105					110			
Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	
		115				120						125				
Gly	Gly	Gly	Ser	Asp	Ile	Val	Met	Thr	Gln	Ser	Pro	Ser	Thr	Leu	Ser	
	130					135					140					
Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser	Gln	Gly	
145					150					155					160	
Ile	Ser	Ser	Trp	Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Arg	Ala	Pro	
				165					170					175		
Lys	Val	Leu	Ile	Tyr	Lys	Ala	Ser	Thr	Leu	Glu	Ser	Gly	Val	Pro	Ser	
			180						185				190			

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser  
 195 200 205

Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr  
 210 215 220

Ser Thr Pro Trp Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg  
 225 230 235 240

Ala Ala

<210> 22  
 <211> 5  
 <212> PRT  
 <213> Homo sapiens

<400> 22  
 Ser Tyr Gly Met His  
 1 5

<210> 23  
 <211> 17  
 <212> PRT  
 <213> Homo sapiens

<400> 23  
 Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys  
 1 5 10 15

Gly

<210> 24  
 <211> 9  
 <212> PRT  
 <213> Homo sapiens

<400> 24  
 His Gly Gln Tyr Ala Leu Asp Ile Trp  
 1 5

<210> 25  
 <211> 11  
 <212> PRT  
 <213> Homo sapiens

<400> 25  
 Arg Ala Ser Gln Gly Ile Ser Ser Trp Leu Ala  
 1 5 10

<210> 26  
 <211> 7  
 <212> PRT  
 <213> Homo sapiens



<400> 26  
 Lys Ala Ser Thr Leu Glu Ser  
 1 5

<210> 27  
 <211> 9  
 <212> PRT  
 <213> Homo sapiens

<400> 27  
 Gln Gln Ser Tyr Ser Thr Pro Trp Thr  
 1 5

<210> 28  
 <211> 417  
 <212> DNA  
 <213> Homo sapiens

<400> 28  
 atgaaattct tagtcaacgt tgcccttgtt tttatggctg tgtacatttc ttacatctat 60  
 gccacaggtgc agctggtgga gtctggggga ggcgtgggtcc agcctgggag gtccctgaga 120  
 ctctcctgtg cagcctctgg attcaccttc agtagctatg gcatgcactg ggtccgccag 180  
 gctccaggca aggggctgga gtgggtggca gttatatcat atgatggaag taataaatac 240  
 tatgcagact ccgtgaaggg ccgattcacc atctccagag acaattccaa gaacacgctg 300  
 tatctgcaaa tgaacagcct gagagacgag gacacggctg tgtattactg tgcgaggcat 360  
 ggtcagtagc ctcttgatat ctgggggcaa gggacaatgg tcaccgtctc ctcaggt 417

<210> 29  
 <211> 381  
 <212> DNA  
 <213> Homo sapiens

<400> 29  
 atgggatgga gctgtatcat cctcttcttg gtagcaacag ctacaggcgc gcactccgac 60  
 atccagatga ccagctctcc ttccaccctg tctgcatctg taggagacag agtcaccatc 120  
 acttgccggg ccagtcaggg tattagtagc tggttggcct ggtatcagca gaaaccaggg 180  
 agagccccta aggtcttgat ctataaggca tctactttag aaagtggggt cccatcaagg 240  
 ttcagcggca gtggatctgg gacagatttc actctacca tcagcagctc gcaacctgaa 300  
 gattttgcaa cttactactg tcaacagagt tacagtaccc cgtggacgtt cggccaaggg 360  
 accaagctcg agatcaaacg t 381

<210> 30  
 <211> 728  
 <212> DNA  
 <213> Homo sapiens

<400> 30  
 gaggtgcagc tgggtgcagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60  
 tcctgtgcag cctctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120  
 ccaggcaagg ggtcggatg ggtggcagtt atatcatatg atggaagtaa taaatactat 180  
 gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cagctgtat 240  
 ctgcaaatga acagcctgag agacgaggac acggctgtgt attactgtgc gaggcaggt 300  
 cagtacgctc ttgatatctg ggggcaaggg acaatggtca ccgtctcttc aggtggaggc 360

```

ggttcaggcg gaggtggcag cggcggtggc ggatcggaca tcgtgatgac ccagtctcct 420
tccaccctgt ctgcatctgt aggagacaga gtcaccatca cttgccgggc cagtcagggt 480
attagtagct ggttggcctg gtatcagcag aaaccaggga gagcccctaa ggtcttgatc 540
tataaggcat ctactttaga aagtggggtc ccatcaaggc tcagcggcag tggatctggg 600
acagatttca ctctcaccat cagcagctctg caacctgaag attttgcaac ttactactgt 660
caacagagtt acagtacccc gtggacgttc ggccaaggga ccaagctgga gatcaaactg 720
gcggccgc

```

```

<210> 31
<211> 18
<212> DNA
<213> Homo sapiens

```

```

<400> 31
agtagctatg gcatgcac

```

18

```

<210> 32
<211> 51
<212> DNA
<213> Homo sapiens

```

```

<400> 32
gttatatcat atgatggaag taataaatatc tatgcagact ccgtgaaggg c

```

51

```

<210> 33
<211> 30
<212> DNA
<213> Homo sapiens

```

```

<400> 33
aggcatggtc agtacgctct tgatatctgg

```

30

```

<210> 34
<211> 33
<212> DNA
<213> Homo sapiens

```

```

<400> 34
cgggccagtc agggatttag tagctggttg gcc

```

33

```

<210> 35
<211> 21
<212> DNA
<213> Homo sapiens

```

```

<400> 35
aaggcatcta ctttagaaag t

```

21

```

<210> 36
<211> 27
<212> DNA
<213> Homo sapiens

```

<400> 36  
caacagagtt acagtacccc gtggacg

27

<210> 37  
<211> 329  
<212> PRT  
<213> Homo sapiens

<400> 37  
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Gly  
1 5 10 15  
Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe  
20 25 30  
Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly  
35 40 45  
Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu  
50 55 60  
Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr  
65 70 75 80  
Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys  
85 90 95  
Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro  
100 105 110  
Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys  
115 120 125  
Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val  
130 135 140  
Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr  
145 150 155 160  
Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu  
165 170 175  
Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His  
180 185 190  
Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys  
195 200 205  
Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln  
210 215 220  
Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu  
225 230 235 240  
Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro  
245 250 255

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn  
 260 265 270

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu  
 275 280 285

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val  
 290 295 300

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln  
 305 310 315 320

Lys Ser Leu Ser Leu Ser Pro Gly Lys  
 325

<210> 38  
 <211> 1599  
 <212> DNA  
 <213> Homo sapiens

<400> 38  
 gcctccacca agggcccatc ggtcttcccc ctggcaccct cctccaagag cacctctggg 60  
 ggcacagcgg ccctgggctg cctggtcaag gactacttcc ccgaaccggg gacgggtgtcg 120  
 tggaaactcag gcgccctgac cagcggcgctc cacaccttcc cggctgtcct acagtcctca 180  
 ggactctact ccctcagcag cgtagtgtacc gtgccctcca gcagcttggg caccagacc 240  
 tacatctgca acgtgaatca caagcccagc aacaccaagg tggacaagaa agttggtgag 300  
 aggccagcac agggaggagg ggtgtctgct ggaagccagg ctcagcgctc ctgcctggac 360  
 gcatcccgcc tatgcagccc cagtccaggg cagcaaggca ggccccgtct gcctcttcac 420  
 ccggaggcct ctgcccgcgc cactcatgct cagggagagg gtcttctggc tttttcccca 480  
 ggctctgggc aggcacaggc taggtgtcccc taaccaggc cctgcacaca aaggggcagg 540  
 tgctgggctc agacctgcca agagccatat ccgggaggag cctgcccctg acctaaagccc 600  
 accccaaagg ccaaaactct cactccctca gctcggacac cttctctcct ccagattcc 660  
 agtaactccc aatcttctct ctccagagcc caaatcttgt gacaaaactc acacatgccc 720  
 accgtgcccc ggtaagccag ccagggcctc gccctccagc tcaaggcggg acaggtgccc 780  
 tagggtagcc tgcattccagg gacaggcccc agccgggtgc tgacacgtcc acctccatct 840  
 cttctcagc acctgaactc ctggggggac cgtcagctct cctcttcccc ccaaaacca 900  
 aggacacct catgatctcc cggacccctg aggtcacatg cgtgggtggg gacgtgagcc 960  
 acgaagacct tgagggtcaag ttcaactggt acgtggacgg cgtggagggt cataatgcca 1020  
 agacaaagcc ggggaggagg cagtacaaca gcacgtaccg tgtggtcagc gtcctcaccg 1080  
 tcctgcacca ggactggtg aatggcaagg agtacaagt caagggtctcc aacaaagccc 1140  
 tcccagcccc catcgagaaa accatctcca aagccaaagg tgggacccgt ggggtgcgag 1200  
 ggccacatgg acagaggccg gctcggccca cctctgccc tgagagtac cgctgtacca 1260  
 acctctgtcc ctacagggca gcccggagaa ccacaggtgt acaccctgcc cccatcccgg 1320  
 gatgagctga ccaagaacca ggtcagcctg acctgcctgg tcaaaggctt ctatcccagc 1380  
 gacatcgccg tggagtggga gagcaatggg cagccggaga acaactacaa gaccacgcct 1440  
 cccgtgctgg actccgacgg ctcttcttct ctctacagca agctcaccgt ggacaagagc 1500  
 aggtggcagc aggggaacgt cttctcatgc tccgtgatgc atgaggctct gcacaaccac 1560  
 tacacgcaga agagcctctc cttaagtccg ggaaaataa 1599

<210> 39  
 <211> 106  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 39

Gly Gln Pro Lys Ala Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser  
 1 5 10 15  
 Glu Glu Leu Gln Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp  
 20 25 30  
 Phe Tyr Pro Gly Ala Val Thr Val Ala Trp Lys Ala Asp Ser Ser Pro  
 35 40 45  
 Val Lys Ala Gly Val Glu Thr Thr Thr Pro Ser Lys Gln Ser Asn Asn  
 50 55 60  
 Lys Tyr Ala Ala Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys  
 65 70 75 80  
 Ser His Arg Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val  
 85 90 95  
 Glu Lys Thr Val Ala Pro Thr Glu Cys Ser  
 100 105

&lt;210&gt; 40

&lt;211&gt; 321

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 40

ggtagccca aggtgcccc ctgggtcact ctgttccgc cctcctctga ggagcttcaa 60  
 gccacaagg ccactgggt gtgtctcata agtgacttct acccgaggagc cgtgacagtg 120  
 gcctggaagg cagatagcag ccccgtaag gcgggagtgg agaccaccac accctccaaa 180  
 caaagcaaca acaagtacgc ggccagcagc tacctgagcc tgacgcctga gcagtgggaag 240  
 tccacagaa gctacagctg ccagggtcacg catgaaggga gcaccgtgga gaagacagtg 300  
 gccctacag aatgttcata g 321

&lt;210&gt; 41

&lt;211&gt; 105

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 41

Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu  
 1 5 10 15  
 Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro  
 20 25 30  
 Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly  
 35 40 45  
 Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr  
 50 55 60  
 Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His  
 65 70 75 80

```
<210> 42
<211> 324
<212> DNA
<213> Homo sapiens
```

```
<210> 43
<211> 538
<212> PRT
<213> Homo sapiens
```

<400> 43																	
Met	Pro	Arg	Gly	Trp	Ala	Ala	Pro	Leu	Leu	Leu	Leu	Leu	Leu	Gln	Gly		
1				5					10					15			
Gly	Trp	Gly	Cys	Pro	Asp	Leu	Val	Cys	Tyr	Thr	Asp	Tyr	Leu	Gln	Thr		
			20					25					30				
Val	Ile	Cys	Ile	Leu	Glu	Met	Trp	Asn	Leu	His	Pro	Ser	Thr	Leu	Thr		
		35					40					45					
Leu	Thr	Trp	Gln	Asp	Gln	Tyr	Glu	Glu	Leu	Lys	Asp	Glu	Ala	Thr	Ser		
	50					55					60						
Cys	Ser	Leu	His	Arg	Ser	Ala	His	Asn	Ala	Thr	His	Ala	Thr	Tyr	Thr		
65					70					75					80		
Cys	His	Met	Asp	Val	Phe	His	Phe	Met	Ala	Asp	Asp	Ile	Phe	Ser	Val		
				85					90					95			
Asn	Ile	Thr	Asp	Gln	Ser	Gly	Asn	Tyr	Ser	Gln	Glu	Cys	Gly	Ser	Phe		
			100					105					110				
Leu	Leu	Ala	Glu	Ser	Ile	Lys	Pro	Ala	Pro	Pro	Phe	Asn	Val	Thr	Val		
		115					120					125					
Thr	Phe	Ser	Gly	Gln	Tyr	Asn	Ile	Ser	Trp	Arg	Ser	Asp	Tyr	Glu	Asp		
	130					135					140						
Pro	Ala	Phe	Tyr	Met	Leu	Lys	Gly	Lys	Leu	Gln	Tyr	Glu	Leu	Gln	Tyr		
145					150					155					160		

Arg Asn Arg Gly Asp Pro Trp Ala Val Ser Pro Arg Arg Lys Leu Ile  
 165 170 175  
 Ser Val Asp Ser Arg Ser Val Ser Leu Leu Pro Leu Glu Phe Arg Lys  
 180 185 190  
 Asp Ser Ser Tyr Glu Leu Gln Val Arg Ala Gly Pro Met Pro Gly Ser  
 195 200 205  
 Ser Tyr Gln Gly Thr Trp Ser Glu Trp Ser Asp Pro Val Ile Phe Gln  
 210 215 220  
 Thr Gln Ser Glu Glu Leu Lys Glu Gly Trp Asn Pro His Leu Leu Leu  
 225 230 235 240  
 Leu Leu Leu Leu Val Ile Val Phe Ile Pro Ala Phe Trp Ser Leu Lys  
 245 250 255  
 Thr His Pro Leu Trp Arg Leu Trp Lys Lys Ile Trp Ala Val Pro Ser  
 260 265 270  
 Pro Glu Arg Phe Phe Met Pro Leu Tyr Lys Gly Cys Ser Gly Asp Phe  
 275 280 285  
 Lys Lys Trp Val Gly Ala Pro Phe Thr Gly Ser Ser Leu Glu Leu Gly  
 290 295 300  
 Pro Trp Ser Pro Glu Val Pro Ser Thr Leu Glu Val Tyr Ser Cys His  
 305 310 315 320  
 Pro Pro Arg Ser Pro Ala Lys Arg Leu Gln Leu Thr Glu Leu Gln Glu  
 325 330 335  
 Pro Ala Glu Leu Val Glu Ser Asp Gly Val Pro Lys Pro Ser Phe Trp  
 340 345 350  
 Pro Thr Ala Gln Asn Ser Gly Gly Ser Ala Tyr Ser Glu Glu Arg Asp  
 355 360 365  
 Arg Pro Tyr Gly Leu Val Ser Ile Asp Thr Val Thr Val Leu Asp Ala  
 370 375 380  
 Glu Gly Pro Cys Thr Trp Pro Cys Ser Cys Glu Asp Asp Gly Tyr Pro  
 385 390 395 400  
 Ala Leu Asp Leu Asp Ala Gly Leu Glu Pro Ser Pro Gly Leu Glu Asp  
 405 410 415  
 Pro Leu Leu Asp Ala Gly Thr Thr Val Leu Ser Cys Gly Cys Val Ser  
 420 425 430  
 Ala Gly Ser Pro Gly Leu Gly Gly Pro Leu Gly Ser Leu Leu Asp Arg  
 435 440 445  
 Leu Lys Pro Pro Leu Ala Asp Gly Glu Asp Trp Ala Gly Gly Leu Pro  
 450 455 460

Trp Gly Gly Arg Ser Pro Gly Gly Val Ser Glu Ser Glu Ala Gly Ser  
465 470 475 480

Pro Leu Ala Gly Leu Asp Met Asp Thr Phe Asp Ser Gly Phe Val Gly  
485 490 495

Ser Asp Cys Ser Ser Pro Val Glu Cys Asp Phe Thr Ser Pro Gly Asp  
500 505 510

Glu Gly Pro Pro Arg Ser Tyr Leu Arg Gln Trp Val Val Ile Pro Pro  
515 520 525

Pro Leu Ser Ser Pro Gly Pro Gln Ala Ser  
530 535

<210> 44

<211> 2665

<212> DNA

<213> Homo sapiens

<400> 44

```

gtcgactgga ggcccagctg cccgtcatca gagtgcagag tcttatgaca gcctgattgg 60
tgactcgggc tgggtgtgga ttctcaccac aggcctctgc ctgctttctc agaccctcat 120
ctgtcaccac cagctgaac ccagctgcca cccccagaag cccatcagac tgcccccagc 180
acacggaatg gattttctgag aaagaagccg aaacagaagg cccgtgggag tcagcatgcc 240
gcgtggctgg gccgccccct tgctcctgct gctgctccag ggaggctggg gctgccccga 300
cctcgtctgc tacaccgatt acctccagac ggtcatctgc atcctggaaa tgtggaacct 360
ccaccccagc acgctcacc ttacctggca agaccagtat gaagagctga aggacgaggc 420
cacctcctgc agctccaca ggtcggccca caatgccacg catgccacct acacctgcca 480
catggatgta ttccacttca tggccgacga cattttcagt gtcaacatca cagaccagtc 540
tgggaactac tcccaggagt gtggcagctt tctcctggct gagagcatca agccggctcc 600
ccctttcaac gtgactgtga ccttctcagg acagtataat atctcctggc gctcagatta 660
cgaagacct gccttctaca tgctgaagg caagcttcag tatgagctgc agtacaggaa 720
ccggggagac ccctgggctg tgagtccgag gagaaagctg atctcagtggt actcaagaag 780
tgtctccctc ctccccctgg agttccgcaa agactcgagc tatgagctgc aggtgcgggc 840
agggcccatg cctggctcct cctaccaggg gacctggagt gaatggagtg acccggtcat 900
ctttcagacc cagtcagagg agttaagga aggtggaac cctcacctgc tgcttctcct 960
cctgcttgct atagtcttca ttctgcctt ctggagcctg aagacctatc cattgtggag 1020
gctatggaag aagatatggg ccgtccccag ccctgagcgg ttcttcatgc ccctgtacaa 1080
gggctgcagc ggagacttca agaatgggt ggggtgcacc ttactggct ccagcctgga 1140
gctgggaccc tggagcccag aggtgccctc caccctggag gtgtacagct gccacccacc 1200
acggagcccg gccaaagggc tgcagctcac ggagctaca gaaccagcag agctggtgga 1260
gtctgacggg gtgcccagc ccagcttctg gccgacagcc cagaactcgg ggggctcagc 1320
ttacagtga gagagggatc ggccatacgg cctggtgtcc attgacacag tgactgtgct 1380
agatgcagag gggccatgca cctggccctg cagctgtgag gatgacggct acccagccct 1440
ggacctggat gctggcctgg agcccagccc aggcctagag gacctactct tggatgcagg 1500
gaccacagtc ctgtcctgtg gctgtgtctc agctggcagc cctgggctag gaggggccct 1560
gggaagcctc ctggacagac taaagccacc ccttgcatat ggggaggact gggctggggg 1620
actgccctgg ggtggccggg cacctggagg ggtctcagag agtgaggcgg gctcacccct 1680
ggccggcctg gatattggaca cgtttgacag tggctttgtg ggctctgact gcagcagccc 1740
tgtggagtg gacttcacca gcccggggga cgaaggaccc ccccgagct acctcccca 1800
gtgggtggtc attcctccgc cactttcgag cctggaccc caggccagct aatgaggctg 1860
actggatgtc cagagctggc caggccactg ggccctgagc cagagacaag gtcacctggg 1920
ctgtgatgtg aagacacctg cagcctttgg tctcctggat gggcctttga gcctgatgtt 1980
tacagtgtct gtgtgtgtgt gtgcatatgt gtgtgtgtgc atatgcatgt gtgtgtgtgt 2040
gtgtgtctta ggtgcgcagt ggcatgtcca cgtgtgtgtg tgattgcacg tgccctgtggg 2100
cctgggataa tgcccaggtt actccatgca ttcacctgcc ctgtgcatgt ctggactcac 2160

```



```

ggagctcacc catgtgcaca agtgtgcaca gtaaactgtt ttgtggtcaa cagatgacaa 2220
cagccgtcct ccctcctagg gtcttgtgtt gcaagttggt ccacagcatc tccggggctt 2280
tgtgggatca gggcattgcc tgtgactgag gcggagccca gccctccagc gtctgcctcc 2340
aggagctgca agaagtccat attgttcctt atcacctgcc aacaggaagc gaaaggggat 2400
ggagtgaacc catggtgacc tcgggaatgg caattttttg ggcgcccccct ggacgaaggt 2460
ctgaatcccg actctgatac cttctggctg tgctacctga gccaaagtcgc ctcccctctc 2520
tgggctagag ttctcttata cagacagtgg ggaaggcatg acacacctgg gggaaattgg 2580
cgatgtcacc cgtgtacggg acgcagccca ggcagacccc tcaataaacg tcagcttcct 2640
tcaaaaaaaaa aaaaaaaaaat ctaga 2665

```

<210> 45

<211> 529

<212> PRT

<213> Mus musculus

<400> 45

```

Met Pro Arg Gly Pro Val Ala Ala Leu Leu Leu Ile Leu His Gly
 1              5              10              15

Ala Trp Ser Cys Leu Asp Leu Thr Cys Tyr Thr Asp Tyr Leu Trp Thr
      20              25              30

Ile Thr Cys Val Leu Glu Thr Arg Ser Pro Asn Pro Ser Ile Leu Ser
      35              40              45

Leu Thr Trp Gln Asp Glu Tyr Glu Glu Leu Gln Asp Gln Glu Thr Phe
 50              55              60

Cys Ser Leu His Arg Ser Gly His Asn Thr Thr His Ile Trp Tyr Thr
 65              70              75              80

Cys His Met Arg Leu Ser Gln Phe Leu Ser Asp Glu Val Phe Ile Val
      85              90              95

Asn Val Thr Asp Gln Ser Gly Asn Asn Ser Gln Glu Cys Gly Ser Phe
 100              105              110

Val Leu Ala Glu Ser Ile Lys Pro Ala Pro Pro Leu Asn Val Thr Val
 115              120              125

Ala Phe Ser Gly Arg Tyr Asp Ile Ser Trp Asp Ser Ala Tyr Asp Glu
 130              135              140

Pro Ser Asn Tyr Val Leu Arg Gly Lys Leu Gln Tyr Glu Leu Gln Tyr
 145              150              155              160

Arg Asn Leu Arg Asp Pro Tyr Ala Val Arg Pro Val Thr Lys Leu Ile
      165              170              175

Ser Val Asp Ser Arg Asn Val Ser Leu Leu Pro Glu Glu Phe His Lys
 180              185              190

Asp Ser Ser Tyr Gln Leu Gln Val Arg Ala Ala Pro Gln Pro Gly Thr
 195              200              205

Ser Phe Arg Gly Thr Trp Ser Glu Trp Ser Asp Pro Val Ile Phe Gln
 210              215              220

```

Thr Gln Ala Gly Glu Pro Glu Ala Gly Trp Asp Pro His Met Leu Leu  
 225 230 235 240  
 Leu Leu Ala Val Leu Ile Ile Val Leu Val Phe Met Gly Leu Lys Ile  
 245 250 255  
 His Leu Pro Trp Arg Leu Trp Lys Lys Ile Trp Ala Pro Val Pro Thr  
 260 265 270  
 Pro Glu Ser Phe Phe Gln Pro Leu Tyr Arg Glu His Ser Gly Asn Phe  
 275 280 285  
 Lys Lys Trp Val Asn Thr Pro Phe Thr Ala Ser Ser Ile Glu Leu Val  
 290 295 300  
 Pro Gln Ser Ser Thr Thr Thr Ser Ala Leu His Leu Ser Leu Tyr Pro  
 305 310 315 320  
 Ala Lys Glu Lys Lys Phe Pro Gly Leu Pro Gly Leu Glu Glu Gln Leu  
 325 330 335  
 Glu Cys Asp Gly Met Ser Glu Pro Gly His Trp Cys Ile Ile Pro Leu  
 340 345 350  
 Ala Ala Gly Gln Ala Val Ser Ala Tyr Ser Glu Glu Arg Asp Arg Pro  
 355 360 365  
 Tyr Gly Leu Val Ser Ile Asp Thr Val Thr Val Gly Asp Ala Glu Gly  
 370 375 380  
 Leu Cys Val Trp Pro Cys Ser Cys Glu Asp Asp Gly Tyr Pro Ala Met  
 385 390 395 400  
 Asn Leu Asp Ala Gly Arg Glu Ser Gly Pro Asn Ser Glu Asp Leu Leu  
 405 410 415  
 Leu Val Thr Asp Pro Ala Phe Leu Ser Cys Gly Cys Val Ser Gly Ser  
 420 425 430  
 Gly Leu Arg Leu Gly Gly Ser Pro Gly Ser Leu Leu Asp Arg Leu Arg  
 435 440 445  
 Leu Ser Phe Ala Lys Glu Gly Asp Trp Thr Ala Asp Pro Thr Trp Arg  
 450 455 460  
 Thr Gly Ser Pro Gly Gly Gly Ser Glu Ser Glu Ala Gly Ser Pro Pro  
 465 470 475 480  
 Gly Leu Asp Met Asp Thr Phe Asp Ser Gly Phe Ala Gly Ser Asp Cys  
 485 490 495  
 Gly Ser Pro Val Glu Thr Asp Glu Gly Pro Pro Arg Ser Tyr Leu Arg  
 500 505 510

Gln Trp Val Val Arg Thr Pro Pro Val Asp Ser Gly Ala Gln Ser  
 515 520 525

Ser

<210> 46  
 <211> 2628  
 <212> DNA  
 <213> Homo sapiens

<400> 46  
 gtcgacgcgg cggtaccagc tgtctgcccc cttctcctgt ggtgtgcctc acggtcactt 60  
 gcttgtctga cegcaagtct gcccatccct ggggcagcca actggcctca gcccgtgccc 120  
 caggcgtgcc ctgtctctgt ctggctgccc cagccctact gtcttctctt gtgtaggctc 180  
 tgcccagatg cccggctggg cctcagcctc aggactatct cagcagtac tcccctgatt 240  
 ctggacttgc acctgactga actcctgccc acctcaaacc ttcacctccc accaccacca 300  
 ctccgagtcc cgctgtgact cccacgccc ggagaccacc caagtgcctc agcctaaaga 360  
 atggctttct gagaaagacc ctgaaggagt aggtctggga cacagcatgc cccggggccc 420  
 actggctgcc ttactcctgc tgattctcca tggagcttgg agctgcctgg acctcacttg 480  
 ctacactgac tactcttgga ccatcacctg tgtcctggag acacggagcc ccaaccccag 540  
 catactcagt ctacactggc aagatgaata tgaggaactt caggaccaag agaccttctg 600  
 cagcctacac aggtctggcc acaacaccac acatatatgg tacacgtgcc atatgogctt 660  
 gtctcaattc ctgtccgatg aagttttcat tgtcaatgtg acggaccagt ctggcaacaa 720  
 ctcccagag tgtggcagct ttgtcctggc tgagagcatc aaaccagctc cccccttgaa 780  
 cgtgactgtg gccttctcag gacgctatga tatctcctgg gactcagctt atgacgaacc 840  
 ctccaactac gtgctgaggg gcaagctaca atatgagctg cagtatcgga acctcagaga 900  
 cccctatgct gtgaggccgg tgaccaagct gatctcagtg gactcaagaa acgtctctct 960  
 tctccctgaa gagttccaca aagattctag ctaccagctg cagggtgcggg cagcgccctca 1020  
 gccaggcact tcattcaggg ggacctggag tgagtggagt gaccccgta tctttcagac 1080  
 ccaggctggg gagcccaggg caggctggga ccctcacatg ctgctgctcc tggctgtctt 1140  
 gatcattgtc ctgggtttca tgggtctgaa gatccacctg ccttggaggc tatggaaaaa 1200  
 gatattggga ccagtggcca cccctgagag tttcttccag cccctgtaca gggagcacag 1260  
 cggaacttc aagaaatggg ttaatacccc ttacacggcc tccagcatag agttgggtgc 1320  
 acagagtcc acaacaacat cagccttaca tctgtcattg tatccagcca aggagaagaa 1380  
 gttcccgggg ctgccgggtc tggagagca actggagtgat gatggaatgt ctgagcctgg 1440  
 tcaactgggc ataataccct tggcagctgg ccaagcgggc tcagcctaca gtgaggagag 1500  
 agaccggcca tatggctcgg tgtccattga cacagtgaat gtgggagatg cagagggcct 1560  
 gtgtgtctgg ccctgtagct gtgaggatga tggctatcca gccatgaacc tggatgctgg 1620  
 ccgagagtct ggcctaatt cagaggatct gctcttgggc acagaccctg cttttctgtc 1680  
 ttgaggctgt gtctcaggta gtggtctcag gcttggaggc tccccaggca gcctactgga 1740  
 cagggtgagg ctgtcatttg caaaggaagg ggactggaca gcagacccaa cctggagaa 1800  
 tgggtcccca ggagggggct ctgagagtga agcagggtcc cccctgggc tggacatgga 1860  
 cacatttgac agtggctttg cagggtcaga ctgtggcagc cccgtggaga ctgatgaagg 1920  
 accccctcga agctatctcc gccagtgggt ggtcaggacc cctccacctg tggacagtgg 1980  
 agcccagagc agctagcata taataaccag ctatagttag aagaggcctc tgagcctggc 2040  
 atttacagtg tgaacatgta ggggtgtgtg tgtgtgtgtg tgtgtgtgtg tgtgtgtgtg 2100  
 tgtgtgtgtg tgtgtgtgtg tgtcttgggt tgtgtgttag cacatccatg ttgggatttg 2160  
 gtctgtgtgt atgtattgta atgtctaaat ctctacccaa agttctaggc ctacgagtga 2220  
 attctcatgt ttacaaactt gctgtgtaaa ccttgttcct taatttaata ccattgggta 2280  
 aataaaattg gctgcaacca attactggag ggattagagg tagggggctt ttgagttacc 2340  
 tgtttggaga tggagaagga gagaggagag accaagagga gaaggaggaa ggagaggaga 2400  
 ggagaggaga ggagaggaga ggagaggaga ggctgccgtg ggctgacctg 2460  
 aggggagagg gaccatgagc ctgtggccag gagaaacagc aagtatctgg ggtacactgg 2520  
 tgaggagggt gccaggccag cagttagaag agtagattag gggtagacct cagtatttgt 2580  
 caaagccaat taaaataaca aaaaaaaaaa aaaagcggcc gctctaga 2628

<210> 47  
 <211> 116  
 <212> PRT  
 <213> Homo sapiens

<400> 47  
 Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser  
   1                  5                  10                  15  
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Asn Ile Tyr  
           20                  25                  30  
 Ser Val Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met  
       35                  40                  45  
 Gly Arg Ile Ile Pro Met Arg Asp Ile Ala Asn Tyr Ala Gln Arg Phe  
   50                  55                  60  
 Gln Gly Arg Val Thr Leu Thr Ala Asp Lys Ser Ser Gly Thr Ala Tyr  
   65                  70                  75                  80  
 Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Trp Cys  
           85                  90                  95  
 Ala Thr Leu Ala Gly Pro Leu Asp Ser Trp Gly Arg Gly Thr Leu Val  
       100                  105                  110  
 Thr Val Ser Ser  
       115

<210> 48  
 <211> 109  
 <212> PRT  
 <213> Homo sapiens

<400> 48  
 Ser Ser Glu Leu Thr Gln Asp Pro Ala Val Ser Val Ala Leu Gly Gln  
   1                  5                  10                  15  
 Thr Val Arg Ile Thr Cys Gln Gly Asp Ser Leu Arg Thr Tyr Tyr Ala  
       20                  25                  30  
 Ser Trp Tyr Gln Lys Arg Pro Gly Gln Ala Pro Ile Leu Val Met Tyr  
       35                  40                  45  
 Gly Arg Asn Lys Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser  
   50                  55                  60  
 Phe Ser Gly Asn Arg Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu  
   65                  70                  75                  80  
 Asp Glu Ala Asp Tyr Tyr Cys Lys Ser Arg Ala Tyr Ser Gly Asn Leu  
       85                  90                  95  
 Val Glu Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly  
       100                  105

<210> 49  
 <211> 242  
 <212> PRT  
 <213> Homo sapiens

<400> 49

Glu	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Ser	1	5	10	15
Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Gly	Thr	Phe	Asn	Ile	Tyr	20	25	30	
Ser	Val	Ser	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met	35	40	45	
Gly	Arg	Ile	Ile	Pro	Met	Arg	Asp	Ile	Ala	Asn	Tyr	Ala	Gln	Arg	Phe	50	55	60	
Gln	Gly	Arg	Val	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Gly	Thr	Ala	Tyr	65	70	75	80
Met	Glu	Leu	Arg	Ser	Leu	Arg	Ser	Asp	Asp	Thr	Ala	Val	Tyr	Trp	Cys	85	90	95	
Ala	Thr	Leu	Ala	Gly	Pro	Leu	Asp	Ser	Trp	Gly	Arg	Gly	Thr	Leu	Val	100	105	110	
Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	115	120	125	
Gly	Gly	Ser	Ala	Leu	Ser	Ser	Glu	Leu	Thr	Gln	Asp	Pro	Ala	Val	Ser	130	135	140	
Val	Ala	Leu	Gly	Gln	Thr	Val	Arg	Ile	Thr	Cys	Gln	Gly	Asp	Ser	Leu	145	150	155	160
Arg	Thr	Tyr	Tyr	Ala	Ser	Trp	Tyr	Gln	Lys	Arg	Pro	Gly	Gln	Ala	Pro	165	170	175	
Ile	Leu	Val	Met	Tyr	Gly	Arg	Asn	Lys	Arg	Pro	Ser	Gly	Ile	Pro	Asp	180	185	190	
Arg	Phe	Ser	Gly	Ser	Phe	Ser	Gly	Asn	Arg	Ala	Ser	Leu	Thr	Ile	Thr	195	200	205	
Gly	Ala	Gln	Ala	Glu	Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Lys	Ser	Arg	Ala	210	215	220	
Tyr	Ser	Gly	Asn	Leu	Val	Glu	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	225	230	235	240

Leu Gly

<210> 50  
 <211> 5  
 <212> PRT

<213> Homo sapiens

<400> 50

Ile Tyr Ser Val Ser  
1 5

<210> 51

<211> 17

<212> PRT

<213> Homo sapiens

<400> 51

Arg Ile Ile Pro Met Arg Asp Ile Ala Asn Tyr Ala Gln Arg Phe Gln  
1 5 10 15

Gly

<210> 52

<211> 7

<212> PRT

<213> Homo sapiens

<400> 52

Leu Ala Gly Pro Leu Asp Ser  
1 5

<210> 53

<211> 11

<212> PRT

<213> Homo sapiens

<400> 53

Gln Gly Asp Ser Leu Arg Thr Tyr Tyr Ala Ser  
1 5 10

<210> 54

<211> 7

<212> PRT

<213> Homo sapiens

<400> 54

Gly Arg Asn Lys Arg Pro Ser  
1 5

<210> 55

<211> 11

<212> PRT

<213> Homo sapiens

<400> 55

Lys Ser Arg Ala Tyr Ser Gly Asn Leu Val Glu  
1 5 10

<210> 56  
 <211> 348  
 <212> DNA  
 <213> Homo sapiens

<400> 56  
 gaggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctgggtcctc ggtgaaggtc 60  
 tcctgcaagg cttctggagg caccttcaac atctatagtg tcagctgggt gcgacaggcc 120  
 cctggacagg ggcttgagtg gatgggaagg atcatcccta tgcgtgatat tgcaaaactac 180  
 gcgcagaggt tccagggcag ggtcacactt accgcggaca agtcctcggg gacagcctac 240  
 atggagttgc gcagcctgag atctgacgac acggccgtct attggtgtgc gacattggct 300  
 ggcccttggg actcctgggg cagaggaacc ctggtcaccg tctcgagt 348

<210> 57  
 <211> 327  
 <212> DNA  
 <213> Homo sapiens

<400> 57  
 tcttctgagc tgactcagga ccctgctgtg tctgtggcct tgggacagac agtcaggatc 60  
 acatgccagg gagacagcct cagaacttat tatgcgagct ggtaccagaa gaggccagga 120  
 caggccccta tacttgtcat gtatggtaga aataagaggc cctcagggat cccagaccga 180  
 ttctctggct ccttctcagg gaacagagct tccttgacca tctactggggc tcaggcggaa 240  
 gatgaggctg actattactg taaatcccgg gcctacagtg gtaacctcgt agaattcggc 300  
 ggagggacca agctgaccgt cctaggt 327

<210> 58  
 <211> 726  
 <212> DNA  
 <213> Homo sapiens

<400> 58  
 gaggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctgggtcctc ggtgaaggtc 60  
 tcctgcaagg cttctggagg caccttcaac atctatagtg tcagctgggt gcgacaggcc 120  
 cctggacagg ggcttgagtg gatgggaagg atcatcccta tgcgtgatat tgcaaaactac 180  
 gcgcagaggt tccagggcag ggtcacactt accgcggaca agtcctcggg gacagcctac 240  
 atggagttgc gcagcctgag atctgacgac acggccgtct attggtgtgc gacattggct 300  
 ggcccttggg actcctgggg cagaggaacc ctggtcaccg tctcgagtgg aggcggcggg 360  
 tcaggcggag gtggctctgg cgggtggcggg agtgcaactt cttctgagct gactcaggac 420  
 cctgctgtgt ctgtggcctt gggacagaca gtcaggatca catgccaggg agacagcctc 480  
 agaacttatt atgcgagctg gtaccagaag aggcaggac aggccctat acttgatg 540  
 tatggtagaa ataagaggcc ctgaggatc ccagaccgat tctctggctc cttctcaggg 600  
 aacagagctt ccttgaccat cactggggct caggcggaa atgaggctga ctattactgt 660  
 aaatcccggg cctacagtgg taacctcgta gaattcggc gagggaccaa gctgaccgtc 720  
 ctaggt 726

<210> 59  
 <211> 15  
 <212> DNA  
 <213> Homo sapiens

<400> 59  
 atctatagtg tcagc

<210> 60  
 <211> 51  
 <212> DNA  
 <213> Homo sapiens

<400> 60  
 aggatcatcc ctatgctga tattgcaaac tacgcgcaga ggttccaggg c 51

<210> 61  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens

<400> 61  
 ttggctggcc ccttggactc c 21

<210> 62  
 <211> 33  
 <212> DNA  
 <213> Homo sapiens

<400> 62  
 cagggagaca gcctcagaac ttattatgcg agc 33

<210> 63  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens

<400> 63  
 ggtagaaata agaggccctc a 21

<210> 64  
 <211> 33  
 <212> DNA  
 <213> Homo sapiens

<400> 64  
 aaatcccggg cctacagtgg taacctcgta gaa 33

<210> 65  
 <211> 118  
 <212> PRT  
 <213> Homo sapiens

<400> 65  
 Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Thr Ser Glu  
 1 5 10 15  
 Thr Leu Ser Leu Thr Cys Ala Val Ser Gly Tyr Ser Ile Ser Ser Gly  
 20 25 30



25

Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp  
35 40 45  
Ile Gly Ser Ile Ser His Thr Gly Asn Thr Tyr Tyr Asn Pro Pro Leu  
50 55 60  
Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser  
65 70 75 80  
Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys  
85 90 95  
Ala Arg Gly Gly Gly Ile Ser Arg Pro Glu Tyr Trp Gly Lys Gly Thr  
100 105 110  
Leu Val Thr Val Ser Ser  
115

<210> 66  
<211> 110  
<212> PRT  
<213> Homo sapiens

<400> 66  
Ser Ser Glu Leu Thr Gln Asp Pro Pro Val Ser Val Ala Leu Gly Gln  
1 5 10 15  
Thr Val Thr Leu Thr Cys Gln Gly Asp Ser Leu Arg Thr Tyr Tyr Ala  
20 25 30  
Ser Trp Tyr Gln Gln Lys Ser Gly Gln Ala Pro Ile Leu Leu Leu Tyr  
35 40 45  
Gly Lys His Lys Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser  
50 55 60  
Thr Ser Gly Asp Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu  
65 70 75 80  
Asp Glu Ala Asp Tyr Tyr Cys Asn Ser Arg Asp Ser Ser Gly Asn Pro  
85 90 95  
His Val Leu Phe Gly Gly Gly Thr Gln Leu Thr Val Leu Ser  
100 105 110

<210> 67  
<211> 245  
<212> PRT  
<213> Homo sapiens

<400> 67  
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Thr Ser Glu  
1 5 10 15  
Thr Leu Ser Leu Thr Cys Ala Val Ser Gly Tyr Ser Ile Ser Ser Gly  
20 25 30

Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp  
           35                          40                          45  
 Ile Gly Ser Ile Ser His Thr Gly Asn Thr Tyr Tyr Asn Pro Pro Leu  
           50                          55                          60  
 Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser  
           65                          70                          75                          80  
 Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys  
                           85                          90                          95  
 Ala Arg Gly Gly Gly Ile Ser Arg Pro Glu Tyr Trp Gly Lys Gly Thr  
                           100                          105                          110  
 Leu Val Thr Val Ser Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser  
           115                          120                          125  
 Gly Gly Gly Gly Ser Ala Leu Ser Ser Glu Leu Thr Gln Asp Pro Pro  
           130                          135                          140  
 Val Ser Val Ala Leu Gly Gln Thr Val Thr Leu Thr Cys Gln Gly Asp  
           145                          150                          155                          160  
 Ser Leu Arg Thr Tyr Tyr Ala Ser Trp Tyr Gln Gln Lys Ser Gly Gln  
                           165                          170                          175  
 Ala Pro Ile Leu Leu Leu Tyr Gly Lys His Lys Arg Pro Ser Gly Ile  
                           180                          185                          190  
 Pro Asp Arg Phe Ser Gly Ser Thr Ser Gly Asp Thr Ala Ser Leu Thr  
           195                          200                          205  
 Ile Thr Gly Ala Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Asn Ser  
           210                          215                          220  
 Arg Asp Ser Ser Gly Asn Pro His Val Leu Phe Gly Gly Gly Thr Gln  
           225                          230                          235                          240  
 Leu Thr Val Leu Ser  
                           245

<210> 68  
 <211> 6  
 <212> PRT  
 <213> Homo sapiens

<400> 68  
 Ser Gly Tyr Tyr Trp Gly  
       1                          5

<210> 69  
 <211> 16  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 69

Ser Ile Ser His Thr Gly Asn Thr Tyr Tyr Asn Pro Pro Leu Lys Ser  
 1 5 10 15

&lt;210&gt; 70

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 70

Gly Gly Gly Ile Ser Arg Pro Glu Tyr  
 1 5

&lt;210&gt; 71

&lt;211&gt; 11

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 71

Gln Gly Asp Ser Leu Arg Thr Tyr Tyr Ala Ser  
 1 5 10

&lt;210&gt; 72

&lt;211&gt; 7

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 72

Gly Lys His Lys Arg Pro Ser  
 1 5

&lt;210&gt; 73

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 73

Asn Ser Arg Asp Ser Ser Gly Asn Pro His Val Leu  
 1 5 10

&lt;210&gt; 74

&lt;211&gt; 354

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 74

caggtgcagc tgcaggagtc gggcccagga ctggtgaaga cttcggagac cctgtccctc 60  
 acctgcgctg tctctgggta ctccatcagc agtgggttact actggggctg gatccggcag 120  
 cccccaggga aggggttgga gtggattggg agtatctctc atactgggaa cacctactac 180  
 aaccgcgccc tcaagagtcg cgtcaccata tcagtagaca cgtccaagaa ccagttctcc 240  
 ctgaaactga gctctgtgac cgccgcagac acggccgtgt attactgtgc gcgaggtggg 300  
 ggaattagca ggccggagta ctggggcaaa ggcaccctgg tcaccgtctc gagg 354

<210> 75  
 <211> 330  
 <212> DNA  
 <213> Homo sapiens

<400> 75  
 tcttctgagc tgactcagga ccctcctgtg tctgtggcct tgggacagac agtcacgctc 60  
 acatgccaaag gagacagcct cagaacctat tatgcaagct ggtaccagca gaagtcagga 120  
 caggccccta tactttctct ctatggtaaa cacaaacggc cctcagggat cccagaccgc 180  
 ttctctggct ccacctcagg agacacagct tccttgacca tcactggggc tcaggcggaa 240  
 gacgaggctg actattactg taactcccgg gactccagtg gcaaccccca tgttctgttc 300  
 ggcggaggga cccagctcac cgttttaagt 330

<210> 76  
 <211> 735  
 <212> DNA  
 <213> Homo sapiens

<400> 76  
 cagggtgcagc tgcaggagtc gggcccagga ctggtgaaga cttcggagac cctgtccctc 60  
 acctgcgctg tctctgggta ctccatcagc agtgggttact actggggctg gatccggcag 120  
 cccccaggga aggggttgga gtggattggg agtatctctc atactgggaa cacctactac 180  
 aaccgcccc tcaagagtcg cgtcaccata tcagtagaca cgtccaagaa ccagttctcc 240  
 ctgaaactga gctctgtgac cgccgcagac acggccgtgt attactgtgc gcgagggtggg 300  
 ggaattagca ggcggagta ctggggcaaa ggcaccctgg tcaccgtctc gagtggaggc 360  
 ggcggttcag gcggagggtg ctctggcggt ggcggaagtg cactttcttc tgagctgact 420  
 caggaccctc ctgtgtctgt ggccttgga cagacagtca cgctcacatg ccaaggagac 480  
 agcctcagaa cctattatgc aagctggtac cagcagaagt caggacaggc ccctatactt 540  
 ctctctatg gtaaacacaa acggccctca gggatcccag accgcttctc tggctccacc 600  
 tcaggagaca cagcttcctt gaccatcact ggggctcagg cggaagacga ggctgactat 660  
 tactgtaact ccgggactc cagtggcaac ccccatgttc tggtcggcgg agggacccag 720  
 ctcaccgttt taagt 735

<210> 77  
 <211> 18  
 <212> DNA  
 <213> Homo sapiens

<400> 77  
 agtgggttact actggggc 18

<210> 78  
 <211> 48  
 <212> DNA  
 <213> Homo sapiens

<400> 78  
 agtatctctc atactgggaa cacctactac aaccgcccc tcaagagt 48

<210> 79  
 <211> 27  
 <212> DNA  
 <213> Homo sapiens

<400> 79  
 ggtgggggaa ttagcaggcc ggagtac 27

<210> 80  
 <211> 33  
 <212> DNA  
 <213> Homo sapiens

<400> 80  
 caaggagaca gcctcagaac ctattatgca agc 33

<210> 81  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens

<400> 81  
 ggtaaacaca aacggccctc a 21

<210> 82  
 <211> 36  
 <212> DNA  
 <213> Homo sapiens

<400> 82  
 aactcccggg actccagtgg caacccccat gttctg 36

<210> 83  
 <211> 116  
 <212> PRT  
 <213> Homo sapiens

<400> 83  
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser  
 1 5 10 15  
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Asn Ile Tyr  
 20 25 30  
 Ser Val Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met  
 35 40 45  
 Gly Arg Ile Ile Pro Met Arg Asp Ile Ala Asn Tyr Ala Gln Arg Phe  
 50 55 60  
 Gln Gly Arg Val Thr Ile Thr Ala Asp Lys Ser Thr Ser Thr Ala Tyr  
 65 70 75 80  
 Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys  
 85 90 95  
 Ala Thr Leu Ala Gly Pro Leu Asp Ser Trp Gly Gln Gly Thr Leu Val  
 100 105 110

Thr Val Ser Ser  
115

<210> 84  
<211> 111  
<212> PRT  
<213> Homo sapiens

<400> 84  
Ser Ser Glu Leu Thr Gln Asp Pro Ala Val Ser Val Ala Leu Gly Gln  
1 5 10 15  
Thr Val Arg Ile Thr Cys Gln Gly Gly Ser Leu Arg Gln Tyr Tyr Ala  
20 25 30  
Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr  
35 40 45  
Gly Lys Asn Lys Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser  
50 55 60  
Ser Ser Gly Asn Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu  
65 70 75 80  
Asp Glu Ala Asp Tyr Tyr Cys Lys Ser Arg Asp Ser Ser Gly Asn His  
85 90 95  
Pro Leu Tyr Val Phe Gly Ala Gly Thr Lys Leu Thr Val Leu Gly  
100 105 110

<210> 85  
<211> 244  
<212> PRT  
<213> Homo sapiens

<400> 85  
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser  
1 5 10 15  
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Asn Ile Tyr  
20 25 30  
Ser Val Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met  
35 40 45  
Gly Arg Ile Ile Pro Met Arg Asp Ile Ala Asn Tyr Ala Gln Arg Phe  
50 55 60  
Gln Gly Arg Val Thr Ile Thr Ala Asp Lys Ser Thr Ser Thr Ala Tyr  
65 70 75 80  
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys  
85 90 95

Ala Thr Leu Ala Gly Pro Leu Asp Ser Trp Gly Gln Gly Thr Leu Val  
 100 105 110

Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly  
 115 120 125

Gly Gly Ser Ala Leu Ser Ser Glu Leu Thr Gln Asp Pro Ala Val Ser  
 130 135 140

Val Ala Leu Gly Gln Thr Val Arg Ile Thr Cys Gln Gly Gly Ser Leu  
 145 150 155 160

Arg Gln Tyr Tyr Ala Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro  
 165 170 175

Val Leu Val Ile Tyr Gly Lys Asn Lys Arg Pro Ser Gly Ile Pro Asp  
 180 185 190

Arg Phe Ser Gly Ser Ser Ser Gly Asn Thr Ala Ser Leu Thr Ile Thr  
 195 200 205

Gly Ala Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Lys Ser Arg Asp  
 210 215 220

Ser Ser Gly Asn His Pro Leu Tyr Val Phe Gly Ala Gly Thr Lys Leu  
 225 230 235 240

Thr Val Leu Gly

<210> 86  
 <211> 5  
 <212> PRT  
 <213> Homo sapiens

<400> 86  
 Ile Tyr Ser Val Ser  
 1 5

<210> 87  
 <211> 17  
 <212> PRT  
 <213> Homo sapiens

<400> 87  
 Arg Ile Ile Pro Met Arg Asp Ile Ala Asn Tyr Ala Gln Arg Phe Gln  
 1 5 10 15

Gly

<210> 88  
 <211> 7  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 88

Leu Ala Gly Pro Leu Asp Ser  
1 5

&lt;210&gt; 89

&lt;211&gt; 11

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 89

Gln Gly Gly Ser Leu Arg Gln Tyr Tyr Ala Ser  
1 5 10

&lt;210&gt; 90

&lt;211&gt; 7

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 90

Gly Lys Asn Lys Arg Pro Ser  
1 5

&lt;210&gt; 91

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 91

Lys Ser Arg Asp Ser Ser Gly Asn His Pro Leu Tyr Val  
1 5 10

&lt;210&gt; 92

&lt;211&gt; 348

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 92

caggtgcagc	tgggtgcagtc	tggggctgag	gtgaagaagc	ctgggtcctc	ggtgaaggtc	60
tcctgcaagg	cttctggagg	caccttcaac	atctatagtg	tcagctgggt	gcgacaggcc	120
cctggacagg	ggcttgagtg	gatgggaagg	atcatcccta	tgcgtgatat	tgcaaactac	180
gcgcagaggt	tccagggcag	ggtcacaatt	accgcgga	agtccacgag	cacagcctac	240
atggagttga	gcagcctgag	atctgaagac	acggcgtct	attattgtgc	gacattggct	300
ggccccttgg	actcctgggg	ccagggcacc	ctggtcaccg	tctcgagt		348

&lt;210&gt; 93

&lt;211&gt; 333

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 93

tcttctgagc	tgactcagga	cccagctgtg	tctgtggcct	tgggacagac	agtcaggatc	60
acatgtcaag	gcggcagcct	cagacaatat	tatgcaagtt	ggtaccaaca	gaagccagga	120
caggcccttg	tgcttgtcat	ctatggtaaa	aataagcgac	cctcagggat	cccagaccga	180



ttctctggct cctcctcagg caacacagct tccttgacca tcaactggggc tcaggcggaa 240  
gatgaggctg actactattg taagtcccgg gacagcagtg gtaaccatcc cctttatgtc 300  
ttcggagctg ggaccaagct gaccgtccta ggt 333

<210> 94  
<211> 732  
<212> DNA  
<213> Homo sapiens

<400> 94  
caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctgggtcctc ggtgaaggtc 60  
tcctgcaagg cttctggagg caccttcaac atctatagtg tcagctgggt gcgacaggcc 120  
cctggacagg ggcttgagtg gatgggaagg atcatcccta tgcgtgatat tgcaaaactac 180  
gcgcagaggc tccagggcag ggtcacaatt accgcccaga agtccacgag cacagcctac 240  
atggagtga gcagcctgag atctgaagac acggccgtct attattgtgc gacattggct 300  
ggccccttg actcctgggg ccagggcacc ctggtcaccg tctcgagtgg aggcggcggg 360  
tcaggcggag gtggctctgg cggtgccgga agtgcacttt cttctgagct gactcaggac 420  
ccagctgtgt ctgtggcctt gggacagaca gtcaggatca catgtcaagg cggcagcctc 480  
agacaatatt atgcaagttg gtaccaacag aagccaggac agggccctgt gcttgtcatc 540  
tatggtaaaa ataagcgacc ctcagggatc ccagaccgat tctctggctc ctccctcaggc 600  
aacacagctt ccttgaccat cactggggct caggcgggaag atgaggctga ctactattgt 660  
aagtcgccggg acagcagtgg taaccatccc ctttatgtct tcggagctgg gaccaagctg 720  
accgtcctag gt 732

<210> 95  
<211> 15  
<212> DNA  
<213> Homo sapiens

<400> 95  
atctatagtg tcagc 15

<210> 96  
<211> 51  
<212> DNA  
<213> Homo sapiens

<400> 96  
aggatcatcc ctatgcgtga tattgcaaac tacgcgcaga ggttccaggg c 51

<210> 97  
<211> 21  
<212> DNA  
<213> Homo sapiens

<400> 97  
ttggctggcc ccttggaactc c 21

<210> 98  
<211> 33  
<212> DNA  
<213> Homo sapiens

<400> 98  
caaggcggca gcctcagaca atattatgca agt 33

<210> 99  
<211> 21  
<212> DNA  
<213> Homo sapiens

<400> 99  
ggtaaaaata agcgaccctc a 21

<210> 100  
<211> 39  
<212> DNA  
<213> Homo sapiens

<400> 100  
aagtcccggg acagcagtgg taaccatccc ctttatgtc 39

<210> 101  
<211> 120  
<212> PRT  
<213> Homo sapiens

<400> 101  
Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala  
1 5 10 15  
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asp Asn  
20 25 30  
Tyr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met  
35 40 45  
Gly Trp Ile Asn Pro Lys Thr Gly Gly Thr Asn Tyr Ala Gln Lys Phe  
50 55 60  
Gln Gly Arg Val Ser Met Thr Arg Asp Thr Ser Ile Asn Thr Ala Tyr  
65 70 75 80  
Met Asp Leu Ser Arg Leu Thr Ser Asp Asp Thr Ala Val Tyr Tyr Cys  
85 90 95  
Thr Arg Ser Leu Ser Pro Tyr Gly Gly Gln Leu Leu Tyr Trp Gly Arg  
100 105 110  
Gly Thr Met Val Thr Val Ser Ser  
115 120

<210> 102  
<211> 110  
<212> PRT  
<213> Homo sapiens

35

<400> 102

Ser Ser Glu Leu Thr Gln Asp Pro Ala Val Ser Val Ala Leu Gly Gln  
1 5 10 15  
Thr Val Arg Ile Thr Cys Gln Gly Asp Ser Leu Arg Arg Tyr Tyr Ala  
20 25 30  
Ser Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Phe  
35 40 45  
Gly Lys Asn Asn Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Ala Ser  
50 55 60  
Ser Ser Gly Asn Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu  
65 70 75 80  
Asp Glu Ala Asp Tyr Tyr Cys Asn Ser Arg Asp Thr Ser Ile Asn His  
85 90 95  
Pro Val Ile Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly  
100 105 110

<210> 103

<211> 247

<212> PRT

<213> Homo sapiens

<400> 103

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala  
1 5 10 15  
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asp Asn  
20 25 30  
Tyr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met  
35 40 45  
Gly Trp Ile Asn Pro Lys Thr Gly Gly Thr Asn Tyr Ala Gln Lys Phe  
50 55 60  
Gln Gly Arg Val Ser Met Thr Arg Asp Thr Ser Ile Asn Thr Ala Tyr  
65 70 75 80  
Met Asp Leu Ser Arg Leu Thr Ser Asp Asp Thr Ala Val Tyr Tyr Cys  
85 90 95  
Thr Arg Ser Leu Ser Pro Tyr Gly Gly Gln Leu Leu Tyr Trp Gly Arg  
100 105 110  
Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly  
115 120 125  
Gly Ser Gly Gly Gly Gly Ser Ala Leu Ser Ser Glu Leu Thr Gln Asp  
130 135 140  
Pro Ala Val Ser Val Ala Leu Gly Gln Thr Val Arg Ile Thr Cys Gln  
145 150 155 160

```
<210> 107
<211> 11
<212> PRT
<213> Homo sapiens
```

&lt;400&gt; 107

Gln Gly Asp Ser Leu Arg Arg Tyr Tyr Ala Ser  
 1 5 10

&lt;210&gt; 108

&lt;211&gt; 7

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 108

Gly Lys Asn Asn Arg Pro Ser  
 1 5

&lt;210&gt; 109

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 109

Asn Ser Arg Asp Thr Ser Ile Asn His Pro Val Ile  
 1 5 10

&lt;210&gt; 110

&lt;211&gt; 360

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 110

gagggtccagc tgggtgcagtc tggagctgag gtgaagaagc ctggggcctc agtgaaggtc 60  
 tcctgttaagg ctcccgata cgccctcacc gacaactata tacactgggt gcgacaggcc 120  
 cctggacaag ggcttgaatg gatgggatgg atcaacccta agactgggtg cacaaactat 180  
 gcacaaaagt ttcagggcag ggtcagcatg accagggaca cgtccatcaa cacagcctac 240  
 atggacctaa gtaggctgac atctgacgac acggcgcgtct attactgtac gagaagcctt 300  
 tccccatatg gtggccaact cctctactgg ggccggggga caatggtcac cgtctcgagt 360

&lt;210&gt; 111

&lt;211&gt; 330

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 111

tcttctgagc tgactcagga ccctgctgtg tctgtggcct tgggacagac agtcaggatc 60  
 acatgccaaag gagacagcct cagaagatat tatgcaagct ggttcagca gaagccagga 120  
 caggccctg tacttgatcat ctttggtaaa aacaaccggc cctcaggat cccagaccga 180  
 ttctctgcct ccagttcagg aaacacagct tccttgacca tcactggggc tcaggcggaa 240  
 gatgaggctg actattactg taactcccgg gacaccagta ttaaccatcc cgtgatattc 300  
 ggcgggggga ccaagctgac cgtcctaggt 330

&lt;210&gt; 112

&lt;211&gt; 741

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

<400> 112  
gaggtccagc tgggtgcagtc tggagctgag gtgaagaagc ctgggggcctc agtgaaggctc 60  
tcctgtaagg cttccggata cgccttcacc gacaactata tacactgggt gcgacaggcc 120  
cctggacaag ggcttgaatg gatgggatgg atcaacccta agactgggtg cacaaactat 180  
gcacaaaagt ttcagggcag ggtcagcatg accagggaca cgtccatcaa cacagcctac 240  
atggacctaa gtaggctgac atctgacgac acggccgtct attactgtac gagaagcctt 300  
tccccatatg gtggccaact cctctactgg ggccggggga caatgggtcac cgtctcgagt 360  
ggaggcggcg gttcaggcgg aggtggctct ggccggtggcg gaagtgcact ttcttctgag 420  
ctgactcagg accctgctgt gtctgtggcc ttgggacaga cagtcaggat cacatgccaa 480  
ggagacagcc tcagaagata ttatgcaagc tggttccagc agaagccagg acaggccctt 540  
gtacttgtca tctttgttaa aaacaaccgg ccctcaggga tcccagaccg attctctgcc 600  
tccagttcag gaaacacagc ttccttgacc atcactgggg ctccaggcga agatgaggct 660  
gactattact gtaactcccg ggacaccagt attaaccatc ccgtgatatt cggcgggggg 720  
accaagctga ccgtcctagg t 741

<210> 113  
<211> 15  
<212> DNA  
<213> Homo sapiens

<400> 113  
gacaactata tacac 15

<210> 114  
<211> 54  
<212> DNA  
<213> Homo sapiens

<400> 114  
tggatcaacc ctaagactgg tggcacaaac tatgcacaaa agtttcaggg cagg 54

<210> 115  
<211> 33  
<212> DNA  
<213> Homo sapiens

<400> 115  
agcctttccc catatggtgg ccaactcctc tac 33

<210> 116  
<211> 33  
<212> DNA  
<213> Homo sapiens

<400> 116  
caaggagaca gcctcagaag atattatgca agc 33

<210> 117  
<211> 21  
<212> DNA  
<213> Homo sapiens

<400> 117  
ggtaaaaaca accggccctc a

21

<210> 118  
<211> 36  
<212> DNA  
<213> Homo sapiens

<400> 118  
aactcccggg acaccagtat taaccatccc gtgata

36

<210> 119  
<211> 118  
<212> PRT  
<213> Homo sapiens

<400> 119  
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly  
1 5 10 15  
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr  
20 25 30  
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45  
Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val  
50 55 60  
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
65 70 75 80  
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys  
85 90 95  
Ala Gly Gly Trp Lys Leu Pro Phe Phe Ala Tyr Trp Gly Arg Gly Thr  
100 105 110  
Leu Val Thr Val Ser Ser  
115

<210> 120  
<211> 110  
<212> PRT  
<213> Homo sapiens

<400> 120  
Ser Ser Glu Leu Thr Gln Asp Pro Ala Val Ser Val Ala Leu Gly Gln  
1 5 10 15  
Thr Val Arg Ile Thr Cys Gln Gly Asp Ser Leu Arg Thr Phe Tyr Ala  
20 25 30  
Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Ile Leu Val Ile Tyr  
35 40 45

Gly Lys Ser Asn Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser  
 50 55 60  
 Ser Ser Gly Asn Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu  
 65 70 75 80  
 Asp Glu Ala Asp Tyr Tyr Cys Tyr Ser Arg Asp Arg Ser Gly Asn His  
 85 90 95  
 Leu Gly Met Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly  
 100 105 110

<210> 121  
 <211> 245  
 <212> PRT  
 <213> Homo sapiens

<400> 121  
 Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly  
 1 5 10 15  
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr  
 20 25 30  
 Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
 35 40 45  
 Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val  
 50 55 60  
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
 65 70 75 80  
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys  
 85 90 95  
 Ala Gly Gly Trp Lys Leu Pro Phe Phe Ala Tyr Trp Gly Arg Gly Thr  
 100 105 110  
 Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser  
 115 120 125  
 Gly Gly Gly Gly Ser Ala Leu Ser Ser Glu Leu Thr Gln Asp Pro Ala  
 130 135 140  
 Val Ser Val Ala Leu Gly Gln Thr Val Arg Ile Thr Cys Gln Gly Asp  
 145 150 155 160  
 Ser Leu Arg Thr Phe Tyr Ala Asn Trp Tyr Gln Gln Lys Pro Gly Gln  
 165 170 175  
 Ala Pro Ile Leu Val Ile Tyr Gly Lys Ser Asn Arg Pro Ser Gly Ile  
 180 185 190  
 Pro Asp Arg Phe Ser Gly Ser Ser Ser Gly Asn Thr Ala Ser Leu Thr  
 195 200 205



Ile Thr Gly Ala Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Tyr Ser  
 210 215 220

Arg Asp Arg Ser Gly Asn His Leu Gly Met Phe Gly Gly Gly Thr Lys  
 225 230 235 240

Leu Thr Val Leu Gly  
 245

<210> 122  
 <211> 5  
 <212> PRT  
 <213> Homo sapiens

<400> 122  
 Ser Tyr Ala Met Ser  
 1 5

<210> 123  
 <211> 17  
 <212> PRT  
 <213> Homo sapiens

<400> 123  
 Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val Lys  
 1 5 10 15

Gly

<210> 124  
 <211> 9  
 <212> PRT  
 <213> Homo sapiens

<400> 124  
 Gly Trp Lys Leu Pro Phe Phe Ala Tyr  
 1 5

<210> 125  
 <211> 11  
 <212> PRT  
 <213> Homo sapiens

<400> 125  
 Gln Gly Asp Ser Leu Arg Thr Phe Tyr Ala Asn  
 1 5 10

<210> 126  
 <211> 7  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 126

Gly Lys Ser Asn Arg Pro Ser  
 1 5

&lt;210&gt; 127

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 127

Tyr Ser Arg Asp Arg Ser Gly Asn His Leu Gly Met  
 1 5 10

&lt;210&gt; 128

&lt;211&gt; 354

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 128

gaggtgcagc tgttggagtc tgggggaggc ttggtacagc ctgggggggc cctgagactc 60  
 tcctgtgcag cctctggatt cacctttagc agctatgcc a tgagctgggt ccgccaggct 120  
 ccaggggaagg ggctggagtg ggtctcagct attagtggta gtggtggtag cacatactac 180  
 gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240  
 ctgcaaatga acagcctgag agccgaggac acggccgtgt attactgtgc ggggggggtgg 300  
 aaacttccat tttttgccta ctggggcccg ggcaccctgg tcaccgtctc gagt 354

&lt;210&gt; 129

&lt;211&gt; 330

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 129

tcttctgagc tgactcagga ccctgctgtg tctgtggcct tgggacagac agtcaggatc 60  
 acatgccaaag gagacagcct cagaaccttt tatgcaaact ggtaccagca gaagccagga 120  
 caggccccta tacttgtcat ctatggtaaa agcaaccgtc cctcagggat cccagaccga 180  
 ttctctggct ccagctcagg aaacacagct tccttgacca tcaactggggc tcaggcggaa 240  
 gatgaggctg actattactg ttactcccgg gacagaagtg gtaaccatct agggatgttc 300  
 ggcggaggga ccaagctgac cgtcctaggt 330

&lt;210&gt; 130

&lt;211&gt; 735

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 130

gaggtgcagc tgttggagtc tgggggaggc ttggtacagc ctgggggggc cctgagactc 60  
 tcctgtgcag cctctggatt cacctttagc agctatgcc a tgagctgggt ccgccaggct 120  
 ccaggggaagg ggctggagtg ggtctcagct attagtggta gtggtggtag cacatactac 180  
 gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240  
 ctgcaaatga acagcctgag agccgaggac acggccgtgt attactgtgc ggggggggtgg 300  
 aaacttccat tttttgccta ctggggcccg ggcaccctgg tcaccgtctc gagtggaggc 360  
 ggcggttcag gcggaggtgg ctctggcggg ggcggaagt cactttcttc tgagctgact 420  
 caggaccctg ctgtgtctgt ggccttggga cagacagtca ggatcacatg ccaaggagac 480  
 agcctcagaa ccttttatgc aaactggtag cagcagaagc caggacaggc ccctatactt 540

gtcatctatg gtaaaagcaa ccgtccctca gggatcccag accgattctc tggctccagc 600  
 tcaggaaaca cagcttcctt gaccatcact ggggtccagg cggaagatga ggctgactat 660  
 tactgttact ccggggacag aagtggtaac catctaggga tggtcggcgg agggaccaag 720  
 ctgaccgtcc taggt 735

<210> 131  
 <211> 15  
 <212> DNA  
 <213> Homo sapiens

<400> 131  
 agctatgccca tgagc 15

<210> 132  
 <211> 54  
 <212> DNA  
 <213> Homo sapiens

<400> 132  
 gctattagtg gtagtggtgg tagcacatac tacgcagact ccgtgaaggg ccgg 54

<210> 133  
 <211> 27  
 <212> DNA  
 <213> Homo sapiens

<400> 133  
 ggggtggaaac ttccattttt tgcctac 27

<210> 134  
 <211> 33  
 <212> DNA  
 <213> Homo sapiens

<400> 134  
 caaggagaca gcctcagaac cttttatgca aac 33

<210> 135  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens

<400> 135  
 ggtaaaagca accgtccctc a 21

<210> 136  
 <211> 36  
 <212> DNA  
 <213> Homo sapiens

<400> 136  
 tactcccggg acagaagtgg taaccatcta gggatg 36

<210> 137  
 <211> 121  
 <212> PRT  
 <213> Homo sapiens

<400> 137  
 Gln Val Gln Leu Gln Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly  
 1 5 10 15  
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr  
 20 25 30  
 Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
 35 40 45  
 Ser Gly Ile Ser Gly Ser Gly Thr Ser Thr Tyr Tyr Ala Asp Ser Val  
 50 55 60  
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
 65 70 75 80  
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys  
 85 90 95  
 Ala Thr His Ile Ser Glu Arg Pro Arg Gly Ala Phe Asp Ile Trp Gly  
 100 105 110  
 Arg Gly Thr Met Val Thr Val Ser Ser  
 115 120

<210> 138  
 <211> 109  
 <212> PRT  
 <213> Homo sapiens

<400> 138  
 Ser Ser Glu Leu Thr Gln Asp Pro Ala Val Ser Val Ala Leu Gly Gln  
 1 5 10 15  
 Thr Val Arg Ile Thr Cys Gln Gly Asp Ser Leu Arg Lys Tyr His Ala  
 20 25 30  
 Thr Trp Tyr Gln Gln Lys Pro Arg Gln Ala Pro Val Leu Val Val Tyr  
 35 40 45  
 Gly Lys Asn Arg Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser  
 50 55 60  
 Ser Ser Gly Asn Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Gly  
 65 70 75 80  
 Asp Glu Ala Asp Tyr Tyr Cys Asn Ser Arg Asp Thr Ser Gly Leu His  
 85 90 95  
 Tyr Val Phe Gly Ala Gly Thr Lys Leu Thr Val Leu Gly  
 100 105

<210> 139  
 <211> 247  
 <212> PRT  
 <213> Homo sapiens

<400> 139  
 Gln Val Gln Leu Gln Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly  
 1 5 10 15  
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr  
 20 25 30  
 Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
 35 40 45  
 Ser Gly Ile Ser Gly Ser Gly Thr Ser Thr Tyr Tyr Ala Asp Ser Val  
 50 55 60  
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
 65 70 75 80  
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys  
 85 90 95  
 Ala Thr His Ile Ser Glu Arg Pro Arg Gly Ala Phe Asp Ile Trp Gly  
 100 105 110  
 Arg Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly  
 115 120 125  
 Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Ser Ser Glu Leu Thr Gln  
 130 135 140  
 Asp Pro Ala Val Ser Val Ala Leu Gly Gln Thr Val Arg Ile Thr Cys  
 145 150 155 160  
 Gln Gly Asp Ser Leu Arg Lys Tyr His Ala Thr Trp Tyr Gln Gln Lys  
 165 170 175  
 Pro Arg Gln Ala Pro Val Leu Val Val Tyr Gly Lys Asn Arg Arg Pro  
 180 185 190  
 Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Ser Ser Gly Asn Thr Ala  
 195 200 205  
 Ser Leu Thr Ile Thr Gly Ala Gln Ala Gly Asp Glu Ala Asp Tyr Tyr  
 210 215 220  
 Cys Asn Ser Arg Asp Thr Ser Gly Leu His Tyr Val Phe Gly Ala Gly  
 225 230 235 240  
 Thr Lys Leu Thr Val Leu Gly  
 245

<210> 140  
 <211> 5  
 <212> PRT  
 <213> Homo sapiens

<400> 140  
 Ser Tyr Ala Met Ser  
 1 5

<210> 141  
 <211> 17  
 <212> PRT  
 <213> Homo sapiens

<400> 141  
 Gly Ile Ser Gly Ser Gly Thr Ser Thr Tyr Tyr Ala Asp Ser Val Lys  
 1 5 10 15

Gly

<210> 142  
 <211> 12  
 <212> PRT  
 <213> Homo sapiens

<400> 142  
 His Ile Ser Glu Arg Pro Arg Gly Ala Phe Asp Ile  
 1 5 10

<210> 143  
 <211> 11  
 <212> PRT  
 <213> Homo sapiens

<400> 143  
 Gln Gly Asp Ser Leu Arg Lys Tyr His Ala Thr  
 1 5 10

<210> 144  
 <211> 7  
 <212> PRT  
 <213> Homo sapiens

<400> 144  
 Gly Lys Asn Arg Arg Pro Ser  
 1 5

<210> 145  
 <211> 11  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 145

Asn Ser Arg Asp Thr Ser Gly Leu His Tyr Val

1

5

10

&lt;210&gt; 146

&lt;211&gt; 363

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 146

```

caggtgcagc tgcaggagtc ggggggaggc ttggtacagc ctgggggggtc cctgagactc 60
tcctgtgcag cctctggatt caccttttagc agctatgcca tgagctgggt ccgccaggct 120
ccaggggaagg ggctggagtg ggtctcaggt attagtggta gtggtactag cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaataga acagcctgag agccgaagac acggccgtat attactgtgc gacacatata 300
tcggaacgtc cacgtggtgc ttttgatata tggggccggg ggacaatggt caccgtctcg 360
agt

```

&lt;210&gt; 147

&lt;211&gt; 327

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 147

```

tcttctgagc tgactcagga ccctgctgtg tctgtggccc tgggacagac agtcaggatc 60
acatgccaaag gagacagcct cagaaagtat catgcaactt ggtaccagca gaagccaagg 120
caggcccctg tacttgtcgt ctatggtaaa aacaggcgcc cctcagggat ccccgaccga 180
ttctctggct ccagctcagg aaacacagct tccctgacca tctactggggc tcaggcggga 240
gatgaggctg actattactg taactcccgg gacaccagtg gtcttcatta tgtcttcgga 300
gctgggacca agctgaccgt cctaggt

```

&lt;210&gt; 148

&lt;211&gt; 741

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 148

```

caggtgcagc tgcaggagtc ggggggaggc ttggtacagc ctgggggggtc cctgagactc 60
tcctgtgcag cctctggatt caccttttagc agctatgcca tgagctgggt ccgccaggct 120
ccaggggaagg ggctggagtg ggtctcaggt attagtggta gtggtactag cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaataga acagcctgag agccgaagac acggccgtat attactgtgc gacacatata 300
tcggaacgtc cacgtggtgc ttttgatata tggggccggg ggacaatggt caccgtctcg 360
agtggaggcg gcggttcagg cggaggtggc tctggcggtg gcggaagtgc actttcttct 420
gagctgactc aggaccctgc tgtgtctgtg gccctgggac agacagtcag gatcacatgc 480
caaggagaca gcctcagaaa gtatcatgca acttgggtacc agcagaagcc aaggcaggcc 540
cctgtacttg tcgtctatgg taaaaacagg cggccctcag ggatccccga ccgattctct 600
ggctccagct caggaaacac agcttccctg accatcactg gggctcaggc gggagatgag 660
gctgactatt actgtaactc ccgggacacc agtgggtctt attatgtctt cggagctggg 720
accaagctga ccgtcctagg t

```

<210> 149  
 <211> 15  
 <212> DNA  
 <213> Homo sapiens

<400> 149  
 agctatgcc a tgagc 15

<210> 150  
 <211> 51  
 <212> DNA  
 <213> Homo sapiens

<400> 150  
 ggtattagt gtagtggtac tagcacatac tacgcagact ccgtgaaggg c 51

<210> 151  
 <211> 36  
 <212> DNA  
 <213> Homo sapiens

<400> 151  
 catatctcgg aacgtccacg tgggtctttt gatatc 36

<210> 152  
 <211> 33  
 <212> DNA  
 <213> Homo sapiens

<400> 152  
 caaggagaca gcctcagaaa gtatcatgca act 33

<210> 153  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens

<400> 153  
 ggtaaaaaca ggcgcccctc a 21

<210> 154  
 <211> 33  
 <212> DNA  
 <213> Homo sapiens

<400> 154  
 aactcccggg acaccagtgg tcttcattat gtc 33